

ABSTRACT

PT XYZ is an industrial manufacturing company that consists of pipe's production and pipe's connection in Indonesia since 1979. Based on the data of the company from January-December 2016, amount of the defective pipes is 3,14%. While the defect tolerance of the company is 0%. This research is using a six sigma method to minimize the defect in Tee Connections. The stage of six sigma method are DMAIC (*Define, Measure, Analyze, Improve, Control*). *Define* is a problem identification stage to find the defect at Tee connection with the average of the defect amount 3,14%. Then, *Measure* is a measuring process stability and process capability, and obtaining processes that come out of control limits and get the value 4. The uncontrolled process will proceed at the *Analyze* stage to determine the defect fixes on the Tee connection and look for the cause. The *Improve* stage to set up a proposal of the efforts that could be done in order to minimize the hole defect. The suggestions given for improvement to human factors and methods as factors causing the defect of Tee connection. The proposed improvements are to addition of operators and providing some grinding tools in each tee cutting process.

Keywords : *Six Sigma, Defect Tee Connection, DMAIC, Addition of Operator*